

Title (en)

Monolithic infrared detector of pyroelectric material

Title (de)

Monolithischer Infrarotdetektor aus pyroelektrischem Material

Title (fr)

Détecteur infrarouge monolithique à matériau pyroélectrique

Publication

EP 0491596 B1 19970806 (FR)

Application

EP 91403308 A 19911206

Priority

FR 9015476 A 19901211

Abstract (en)

[origin: EP0491596A1] The invention relates to infrared detectors whose detecting part consists of a layer of pyroelectric material deposited on a semiconductor substrate. The purpose is in particular to facilitate the polarisation of the layer of pyroelectric material after its deposition on the semiconductor substrate. <??>The detector of the invention includes a semiconductor substrate (15) bearing a layer of pyroelectric material (11) in which zones are defined, each corresponding to a pixel (P1 to P9). Each pyroelectric zone is defined by an electrode, termed the lower electrode (EI 1 to EI 9), in contact with one face of the pyroelectric layer (11) turned towards the substrate (15). According to a characteristic of the invention, a diode, termed the polarising diode (DP), is formed in the substrate (15) for each pixel (P1 to P9). The polarising diode is connected to the lower electrode (EI 1 to EI 9) in such a way as to permit a current to pass between the substrate (15) and the lower electrode. <IMAGE>

IPC 1-7

H01L 27/148; G01J 5/34

IPC 8 full level

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CPC (source: EP US)

G01J 5/34 (2013.01 - EP US); **H01L 27/14875** (2013.01 - EP US); **H01L 27/14881** (2013.01 - EP US); **H10N 15/10** (2023.02 - EP US)

Cited by

CN104776921A; EP1172849A3; EP1178545A1; DE4438673A1; DE4438673C2; US6727113B2; WO0213283A1; EP0611203B1

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